

DOH-Hillsborough County COVID-19 Surveillance Report

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SUMMARY: Over the past week (4/11-4/17), 3,401 COVID cases were identified in Hillsborough County, a increase of 10% from 3,096 during the previous week. The 7-day moving **average of cases per day increased and is now 486**. The 7-day moving average of **percent positivity increased from week 14 and is at 9.9%**. **Case rates were highest in the 25-34 age group**. Rates remained stable in all race/ethnicities during week 15, and **case rate continues to be highest in Hispanics**. Case rates **increased slightly Statewide and in Hillsborough and Pasco County**, and decreased slightly in Pinellas County. During the past week in Hillsborough County, **testing rate increased slightly**. Pinellas County is experiencing higher testing per 100,000 residents compared to Pasco and Hillsborough. Antigen testing results are being reported on average within the same day and PCR testing turnaround time has stayed consistent at around 2 days. Hillsborough County **hospitalizations for COVID increased by 7.7%** and are now averaging 252 total COVID inpatients a day.

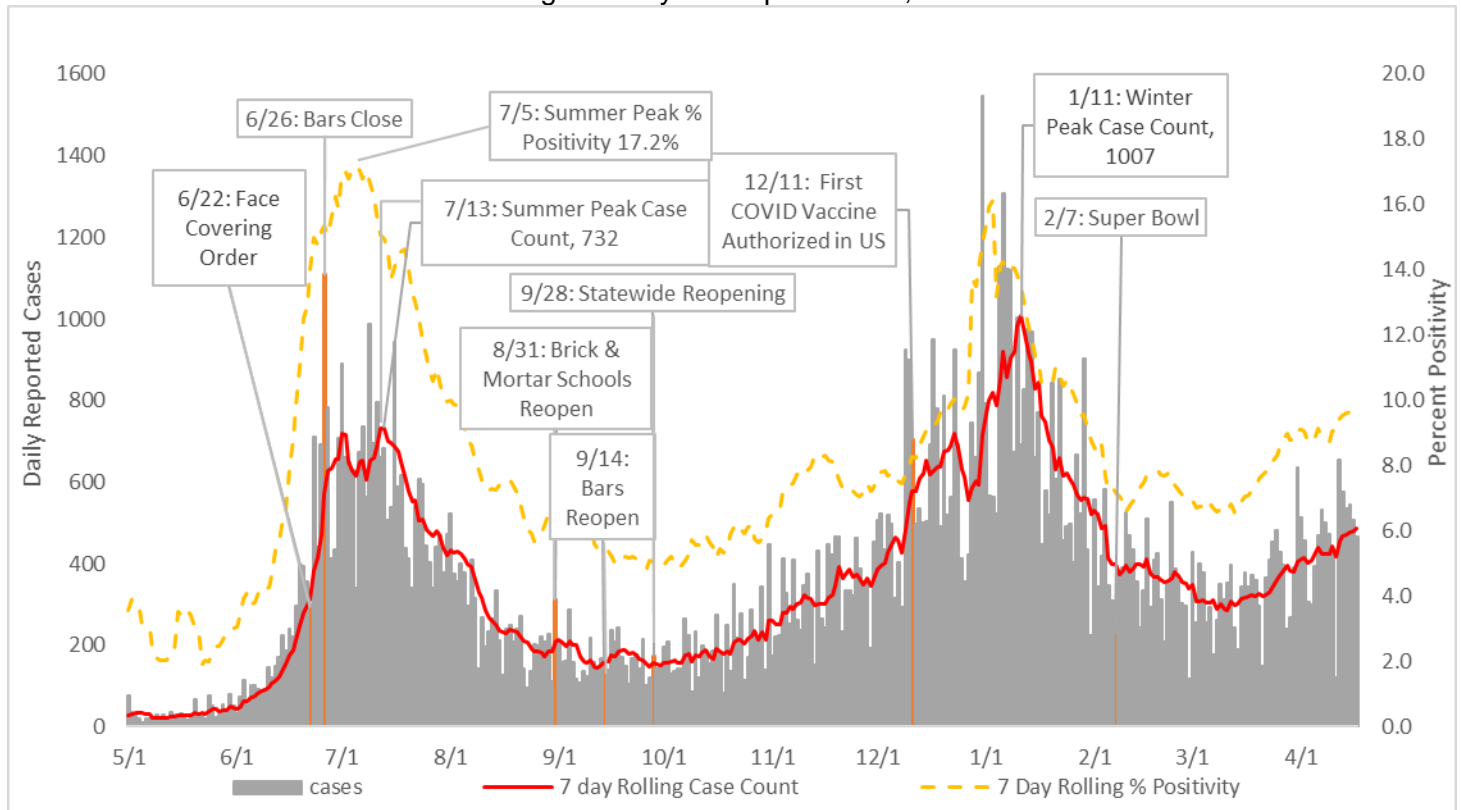
Vaccine Data is now summarized and presented in its own weekly report - Available Here:

<http://hillsborough.floridahealth.gov/programs-and-services/infectious-disease-services/epidemiology/vaccine-report.html>

INFLUENZA/RESPIRATORY SURVEILLANCE: Influenza activity remains extremely low throughout Hillsborough County and the State. No outbreaks of Influenza or other respiratory pathogens have been reported this influenza season. Very few positive influenza labs have been received and no pediatric mortalities have been reported. Additional information and data about influenza surveillance is available at:

<http://www.floridahealth.gov/diseases-and-conditions/influenza/>

Fig 1. Daily New COVID cases and percent positivity trends in Hillsborough County Residents. The **7-day moving average for percent positivity increased slightly and is now 9.9%**. The **7-day average number of new cases per day (486) increased by 10% from week 14 but is well below the highest 7-day average of 1007 observed on 1/11/2021**. Hillsborough County has reported 129,867 cases to date.



COVID DATA ARE PROVISIONAL AND SUBJECT TO CHANGE

R_t AND INFECTION RATE ESTIMATES

Fig 2A (right). R_t median estimate for Hillsborough County since March 2020. R_t estimate is calculated based on “nowcasted” new case rates (incidence). Nowcasted refers to the fact that the incidence data has been corrected for the disease progression, reporting delays and observation error. Figure 2 includes the historical R_t median estimates (green), the past weeks nowcasted R_t median estimate based on partial data (orange) and the next 7 days forecasted R_t median estimate (purple). The colors, from darkest to lightest, indicate 20%, 50% and 90% credible intervals (CI), respectively. An R_t above 1.0 means the outbreak is growing – or viewed another way, one person is infecting more than one additional person – and R_t below 1.0 means that outbreak is shrinking. **The current estimate of R_t for Hillsborough County up until 4/16/2021 was stable at 1.00 (90% CI: 0.89-1.20) with last week when the estimate was 1.10 (90% CI = 0.89-1.20).**

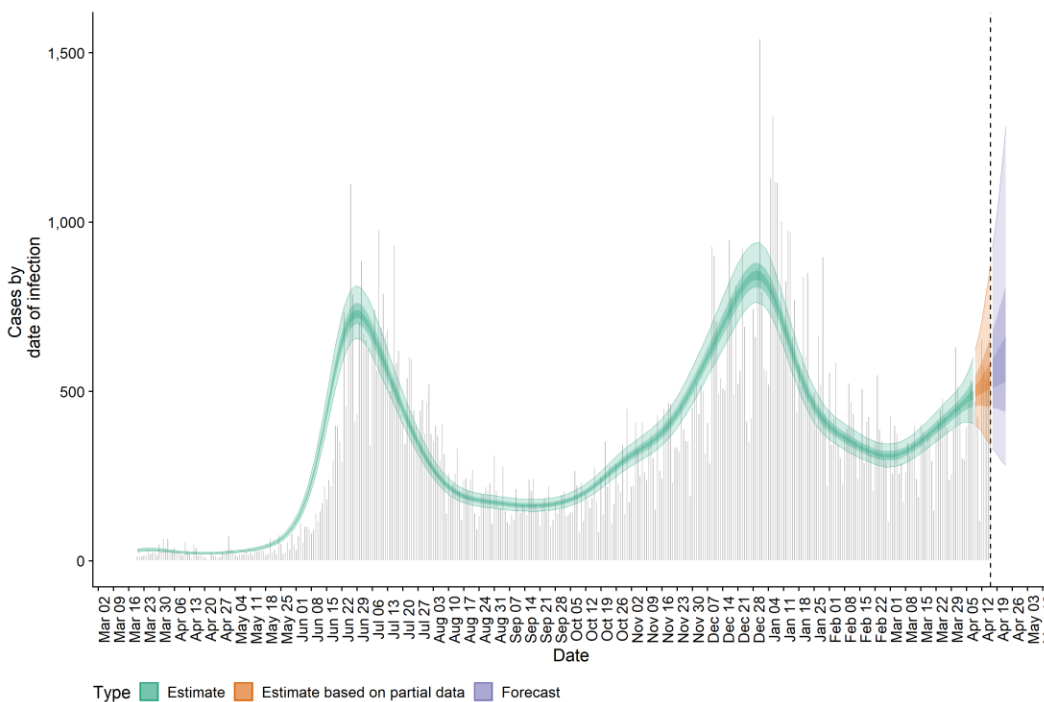
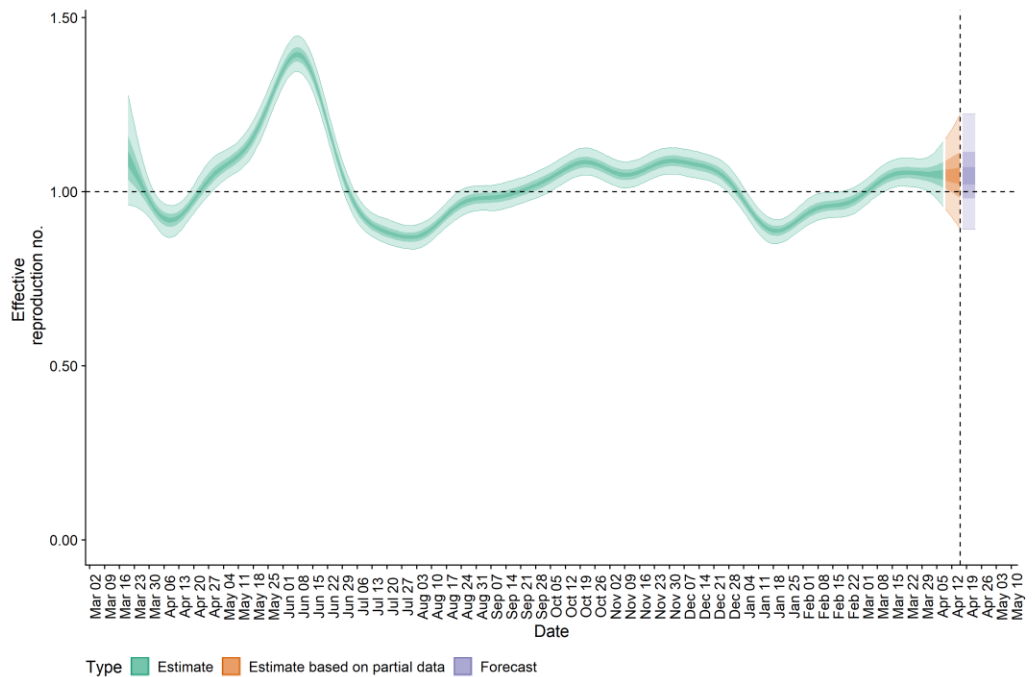
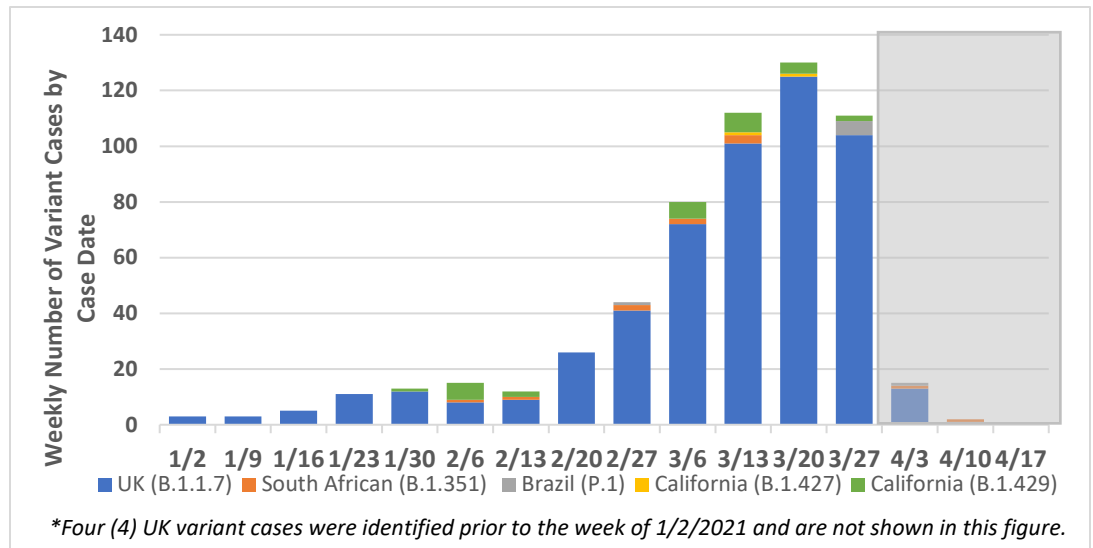


Fig 2B (left). Hillsborough County Daily cases since March 2020. Case estimate is calculated based on “nowcasted” new case rates (incidence). Nowcasted refers to the fact that the incidence data has been corrected for the disease progression, reporting delays and observation error. Figure 2B includes the historical case estimates (green), the past weeks nowcasted case estimate based on partial data (orange) and the next 7 days forecasted case estimate (purple). The colors, from darkest to lightest, indicate 20%, 50% and 90% credible intervals (CI), respectively. **Based on this past week's case information up until 4/16/2021 the median rate of growth of new infections are 0.012 (90% CI: -0.03 - 0.06), meaning that new infections are remaining stable.**

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VARIANT CASES

Fig 2C (right). Variant COVID-19 cases in Hillsborough County shown by the date they became a case in Merlin. Variant data is provisional and intended for awareness and planning purposes only. The Florida Department of Health (FDOH) three Bureau of Public Health Laboratories (BPHL) have been taking randomized samplings from their positive COVID-19 specimens and performing genetic sequencing.



Additionally, a few hospital, university and private labs have worked with CDC and are also performing sequencing. Once sequencing is complete, BPHL notifies FDOH staff of any COVID-19 cases where variant strains were identified. It can take up to 3 weeks for DOH to be notified of sequencing results, therefore data during this time should be considered incomplete (shaded grey). **As of 4/17/2021, 586 variant cases have been identified in Hillsborough County, 538 of the UK variant (B.1.1.7), 11 South African variant (B.1.351), 7 Brazil variant (P.1), 2 California variant (B.1.427) and 28 California variant (B.1.429).**

CASES, CASE RATES AND GROUP SETTINGS

Fig 3. Comparison of COVID 7-day average case rate per 100,000 population for Pinellas, Pasco, and Hillsborough Counties and the State of Florida for the past 90 days. **Hillsborough and Pasco County case rates along with the State increased slightly, where as Pinellas County saw a decrease.** The **Florida case rate increased** and is now **29.3** cases per 100,000.

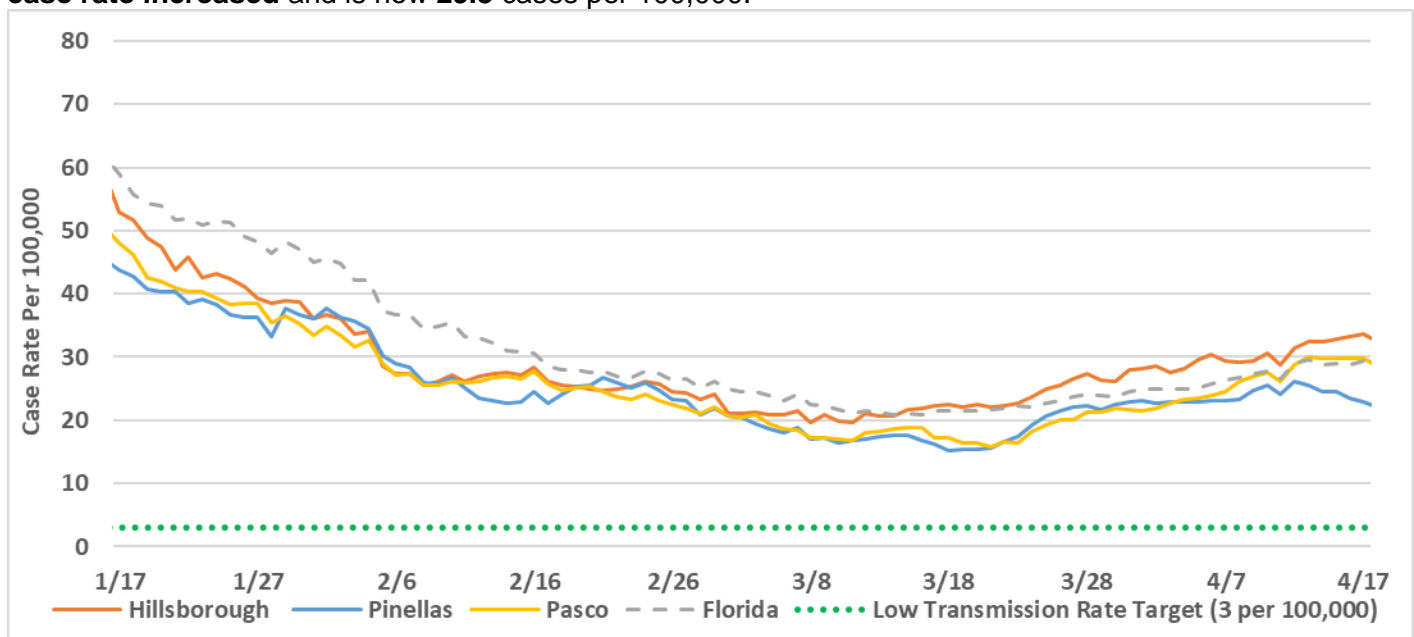


Fig 4. Comparison of COVID 7-day average case rate per 100,000 population by race and ethnicity for the past 90 days in Hillsborough County. Population data was acquired from FLHealth CHARTS. Cases with unknown race or ethnicity are excluded. Rates remained stable for all race and ethnicities, and **rates continue to remain highest among Hispanics.**

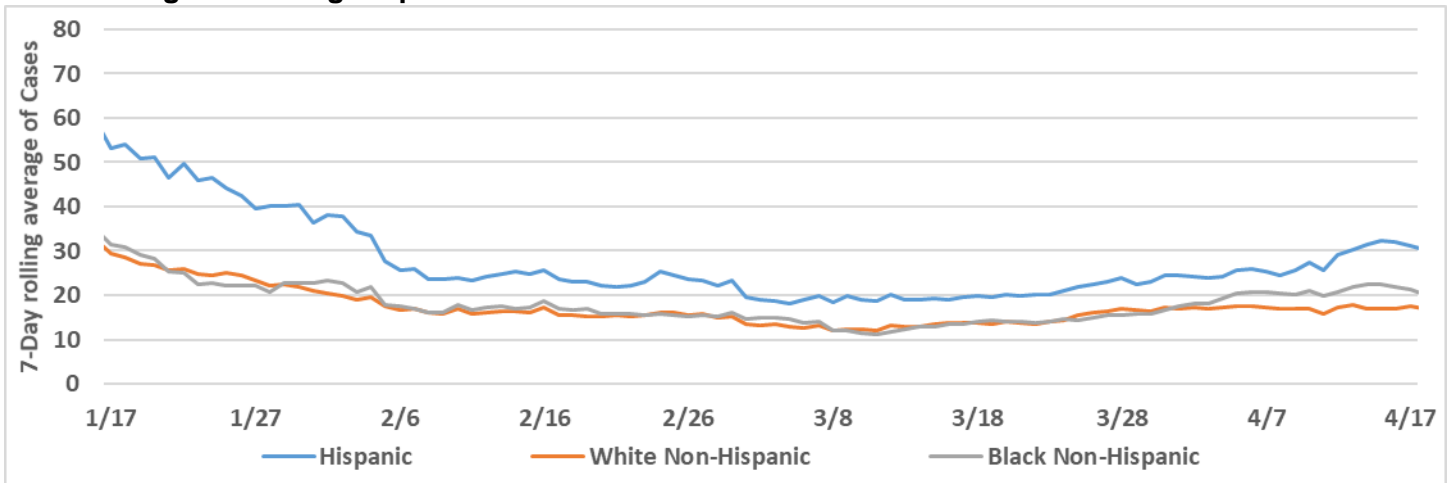


Fig 5. COVID 7-day average case rates per 100,000 population by age group for the past 90 days in Hillsborough County. **The 65+ age group ended the week with the lowest rate but has recently increased. Sharp increases are being seen in the 25-34 and 35-44 year age groups.**

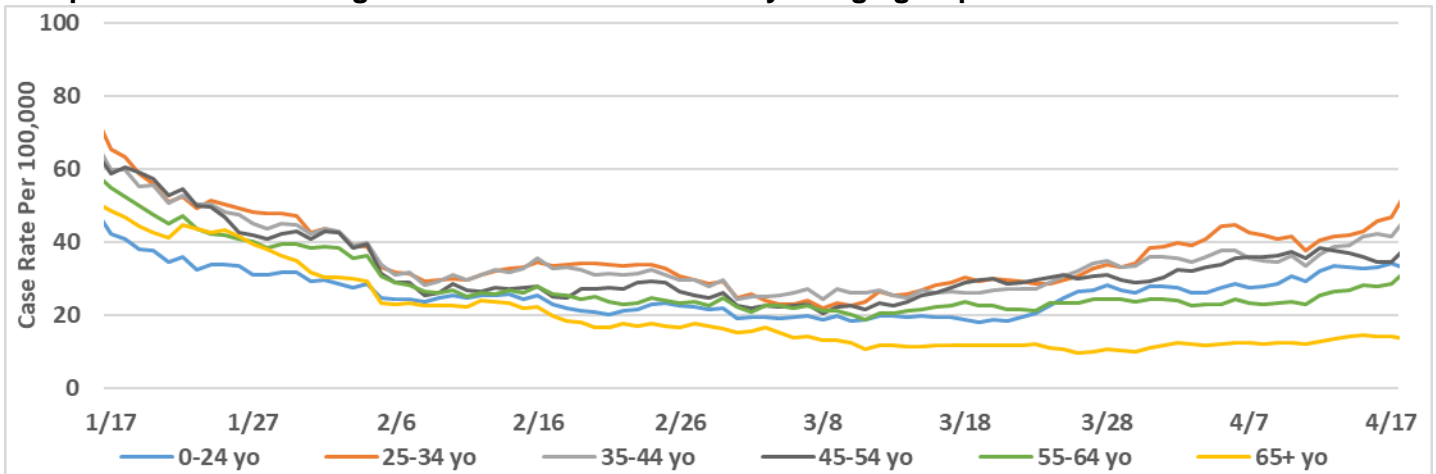


Fig 6. COVID pediatric and college-aged case rates per 100,000 population by age group, over the past 90 days in Hillsborough County. The 0-24 yo age group from Fig 5 (above), broken out into Preschool aged (0-4 yo), Elementary aged (5-10 yo), Middle/High School aged (11-17 yo) and College aged (18-24 yo). **Rates increased in all pediatric and college-aged cases, rates remain highest in college aged cases.**

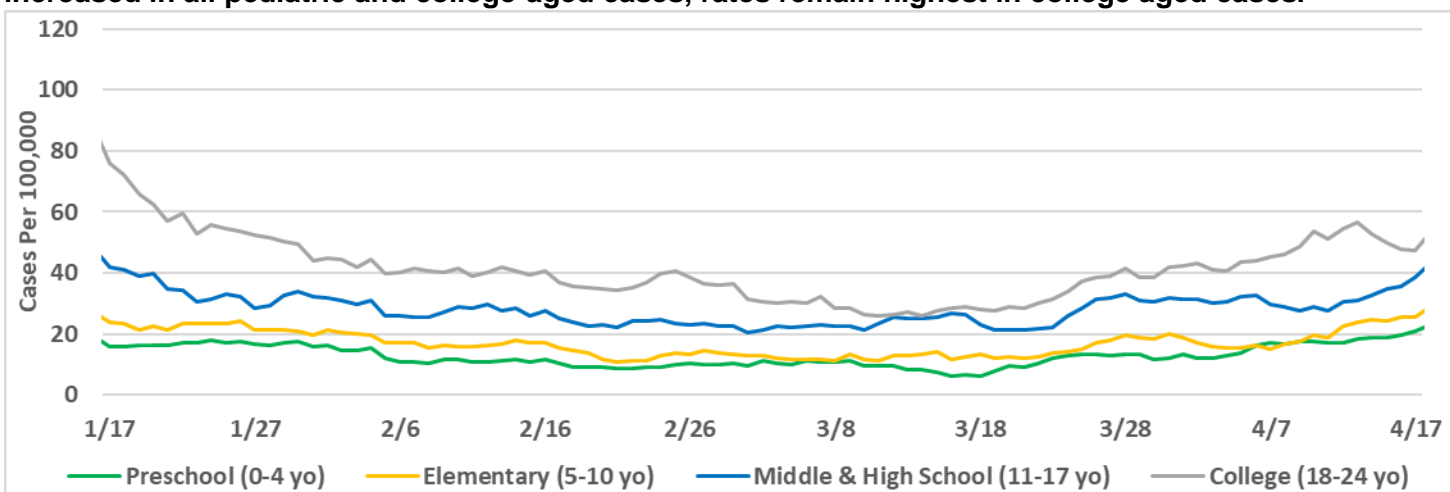


Fig 7. (right) Weekly reported COVID cases associated with **students and staff at K-12 schools** in Hillsborough County. COVID case must have been on campus during exposure period or infectious period to be counted. Public schools in Hillsborough County were closed for winter break for 2 weeks and the total number of cases decreased during those weeks. Public schools re-opened on January 4th, 2021 causing steady case rates since Week 1. Most cases are associated with family gatherings, travel and extra-curricular activities. Public schools were on Spring Break during week 11, resulting in lower numbers of cases for students and for staff. **Cases for both students and staff are remaining stable but could change due to ongoing investigations.**

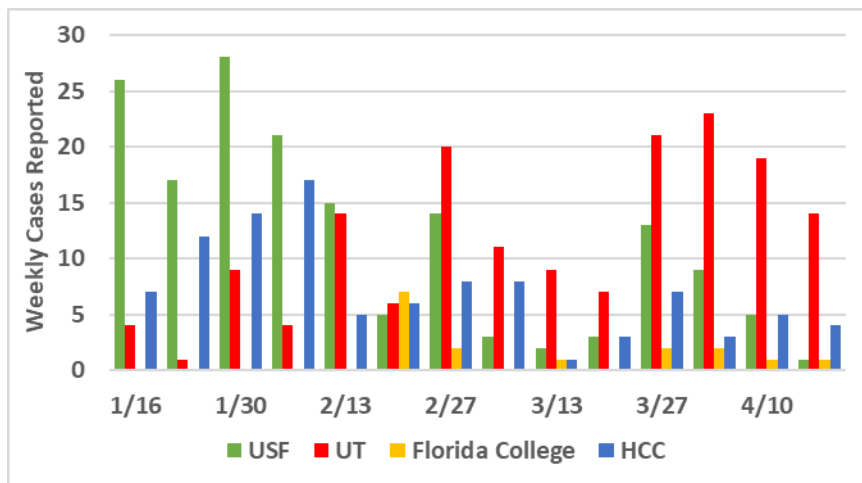
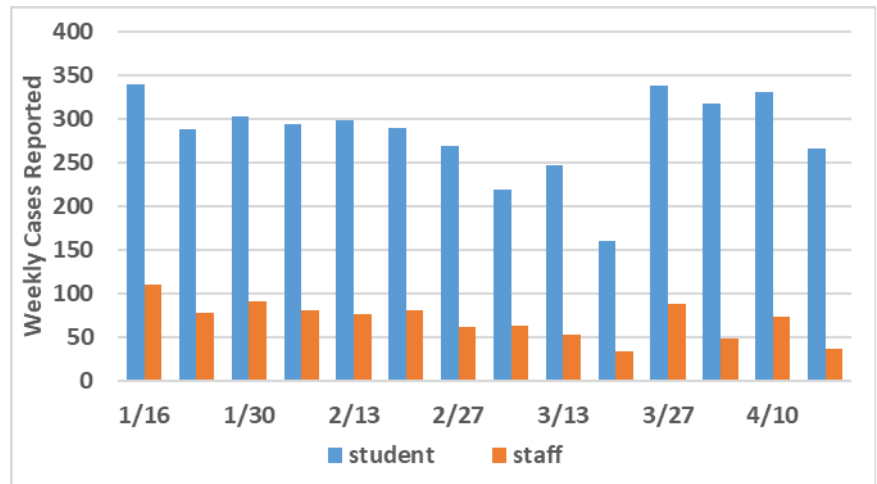


Fig 8. (left) Weekly reported COVID cases associated with **college students and staff** by reporting week. COVID case must have been on campus during exposure period or infectious period to be counted. Most college campuses have now re-opened to in-person learning. **Low numbers of total cases were identified as compared to the fall semester. UT has reported the most cases for the past several weeks.**

Fig 9. Daily COVID cases associated with **LTCF residents and staff** for the past 90 days in Hillsborough County. COVID case must have been on LTCF site during the exposure period or infectious period to be counted. The 7-day rolling average of **cases associated with LTCFs** has slightly increased during the past week.

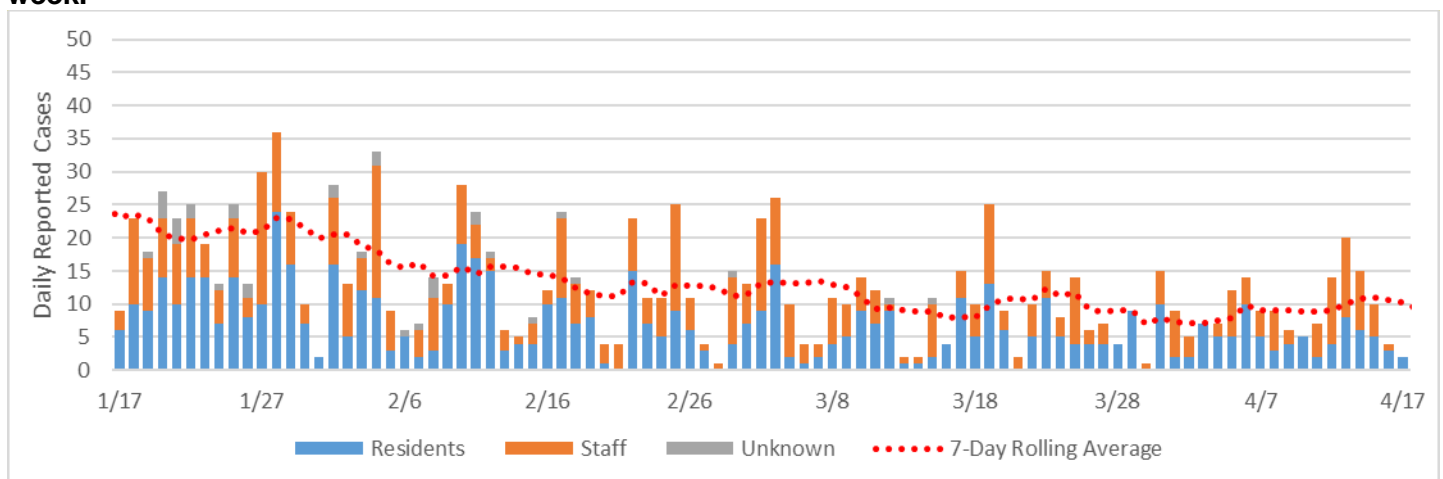
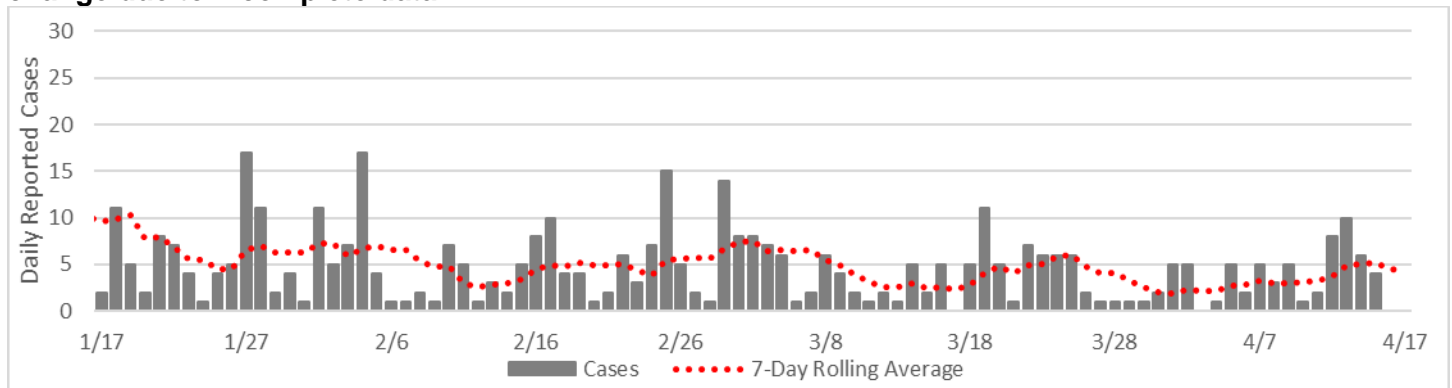


Fig. 10. COVID cases in **Health Care Workers (HCW)** for the past 90 days. To collect case occupation a case interview is required with the case, therefore the past week has missing/incomplete data, as case investigations are ongoing. **Reported cases in HCWs have slightly increased this past week but could change due to incomplete data.**



TESTING RATE, TURN-AROUND TIME AND PERCENT POSITIVITY

Fig 11. Reported COVID testing volume and rate for Hillsborough County residents for the past 90 days. Tests are not de-duplicated by person or day; therefore, one person can have multiple tests counted across multiple days. Testing rate has been slightly increasing over the last four weeks.

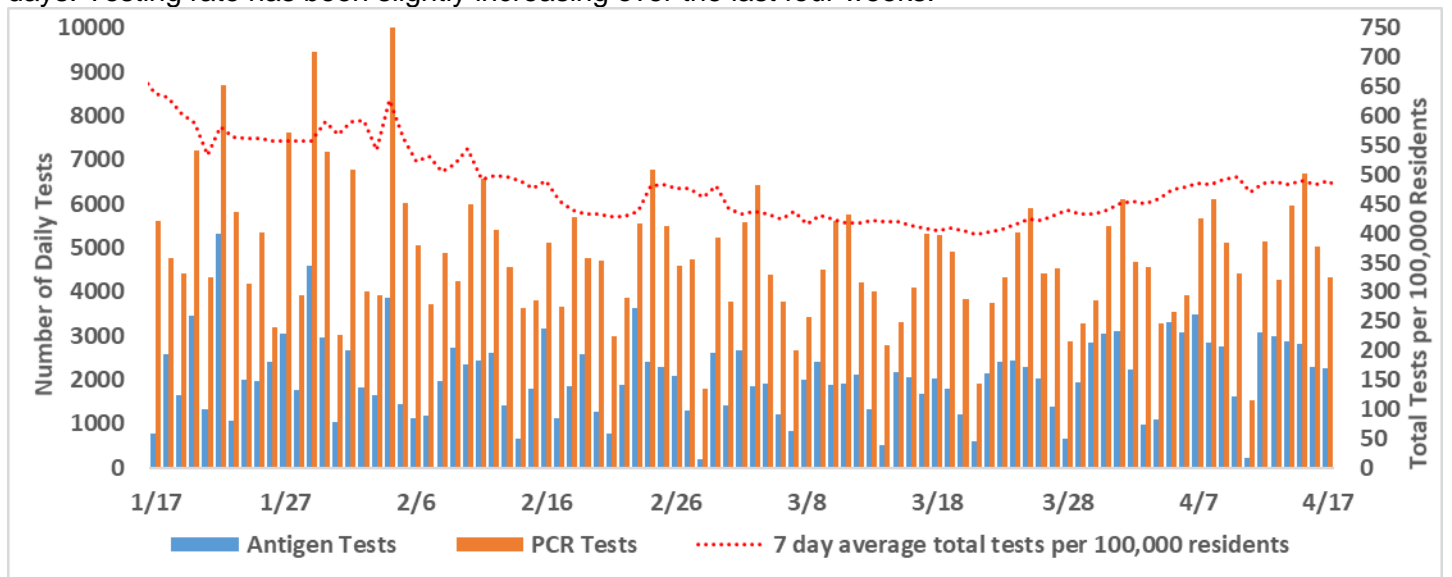


Fig 11B. Reported COVID 7-day average testing rate per 100,000 population for Pinellas, Pasco, and Hillsborough Counties and the State for the past 90 days. These counts are de-duplicated, where each person is only counted once per day, regardless of how many times they were tested. All Tampa Bay area counties slightly increased.

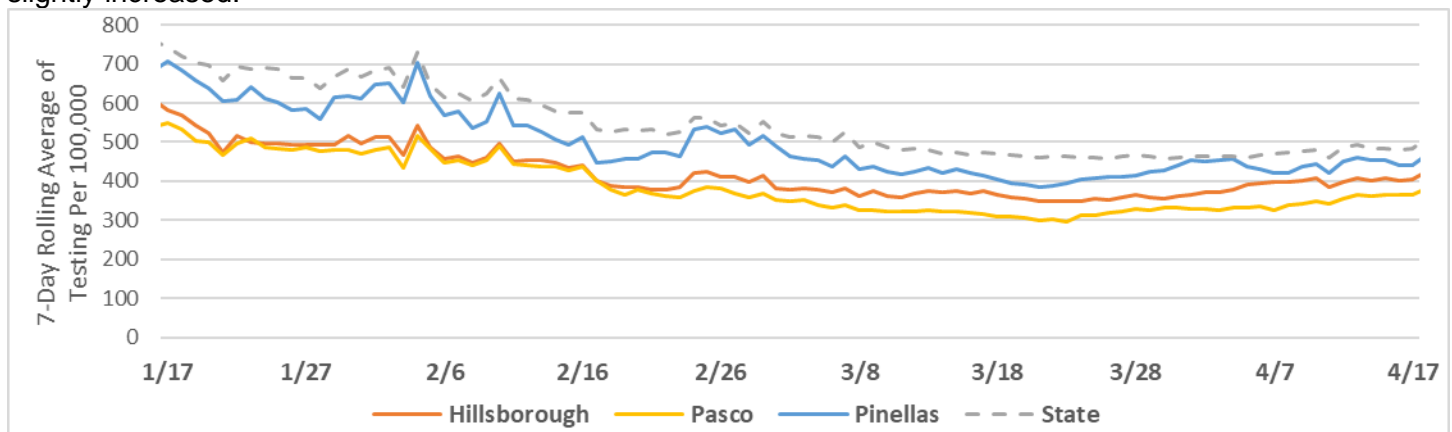
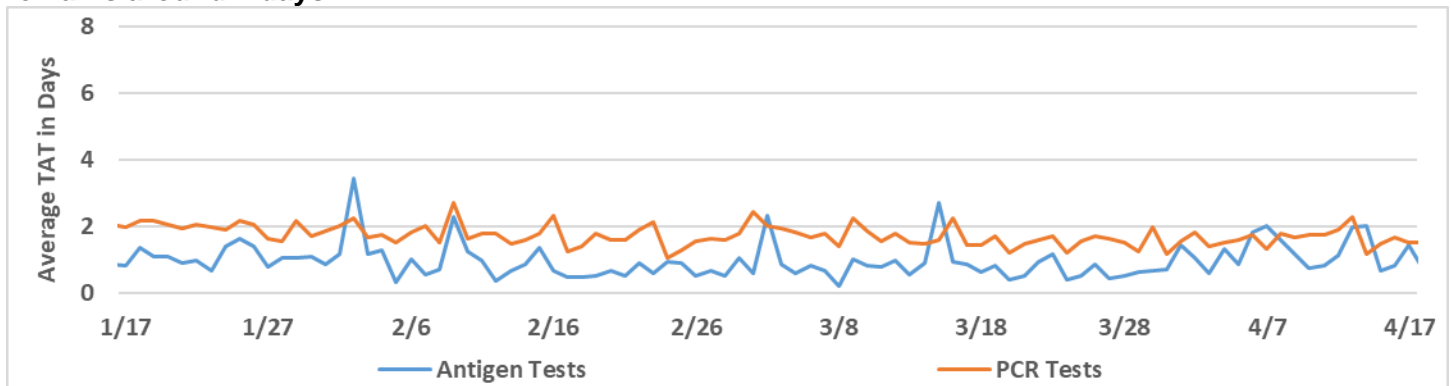


Fig 12. Average COVID testing turn-around-time (TAT) from specimen collection until results reported to DOH for the past 90 days. During November and December, we observed delays in the turnaround time for the reporting of antigen testing results from a few facilities - these results are filtered out of the analysis for that time (dashed line). **Average TAT for antigen tests is generally less than one day. PCR test average TAT remains around 2 days.**



HOSPITALIZATIONS AND HOSPITALIZATION RATE

Fig 13. COVID admissions and inpatients in Non-ICU and ICU beds in Hillsborough County, based on the AHCA ESS Report. Hillsborough County **inpatient hospitalizations for COVID increased by 7.7%** with a 7-day average of 252 total COVID inpatients a day. **Daily COVID admits remained the same** averaging 37 per day.

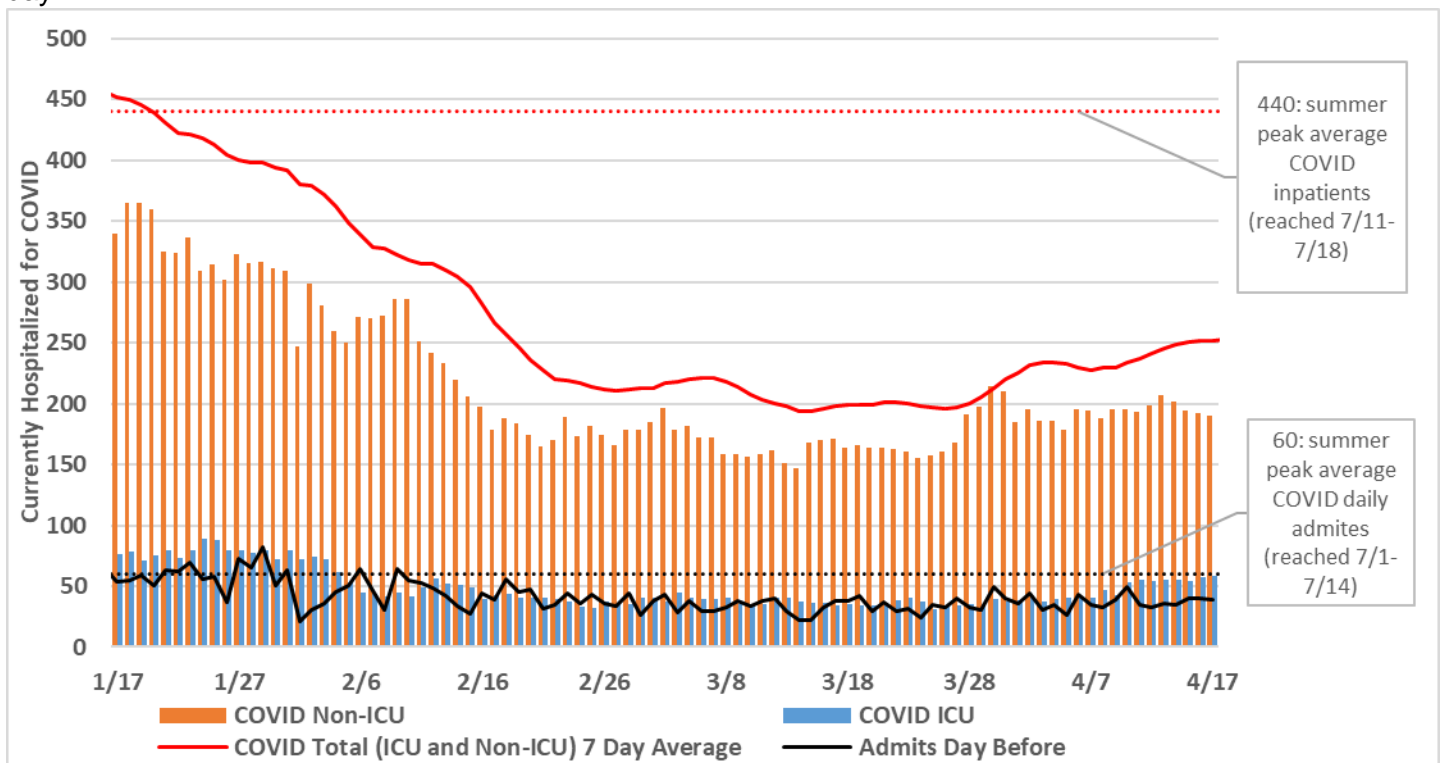


Fig 14. Percentage of Hospital and ICU beds occupied in Hillsborough County, based on AHCA ESS Report. Occupied beds increased to 87% for ICU beds and remained the same at 72% in Non-ICU beds.

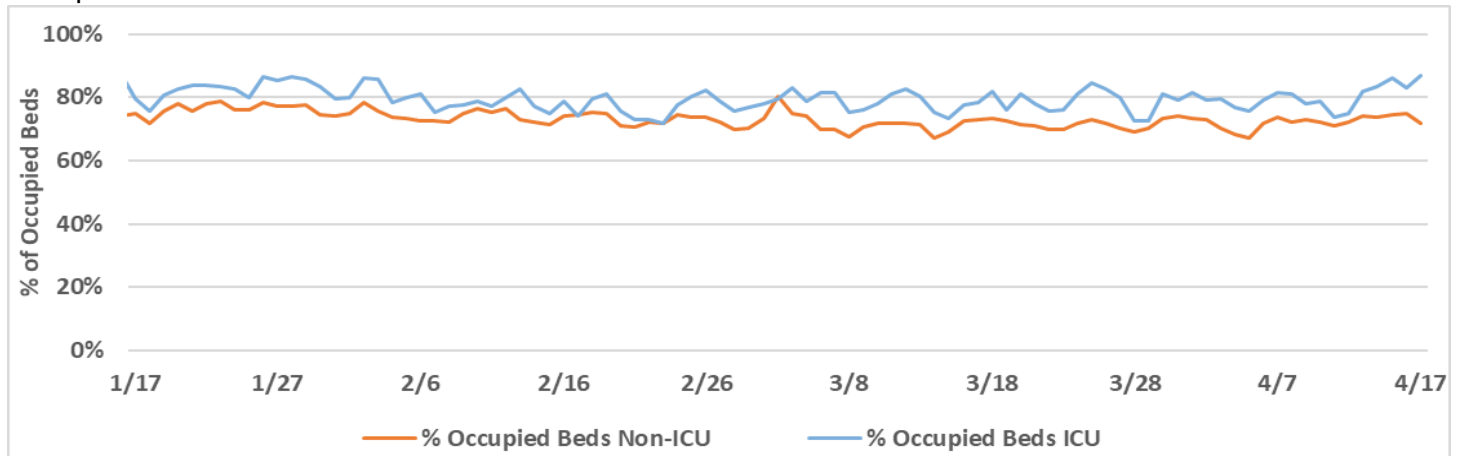


Fig 15. COVID Hospitalization rate per 100,000 by Race/ethnicity, over the past 90 days, based on Merlin case data. Cases with unknown race/ethnicity are excluded. Population data was acquired from FLHealth CHARTS. To collect case hospitalization a case investigation and/or interview is required with the case, therefore the past week has missing/incomplete data as case investigations are ongoing. Over the past week, **hospitalization rates were highest in Black Non-Hispanics.**

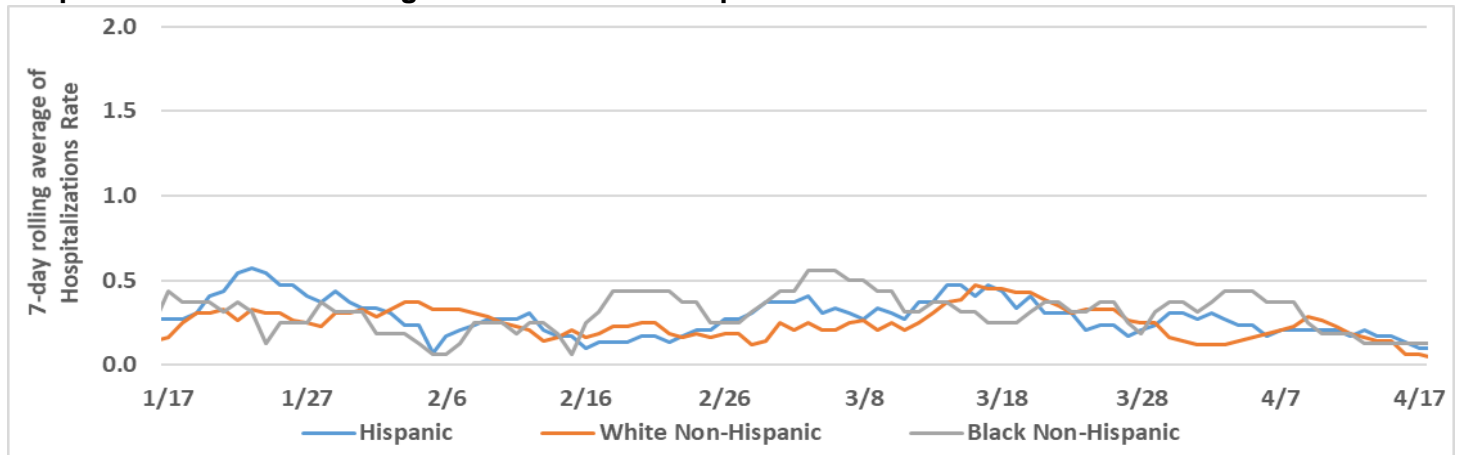
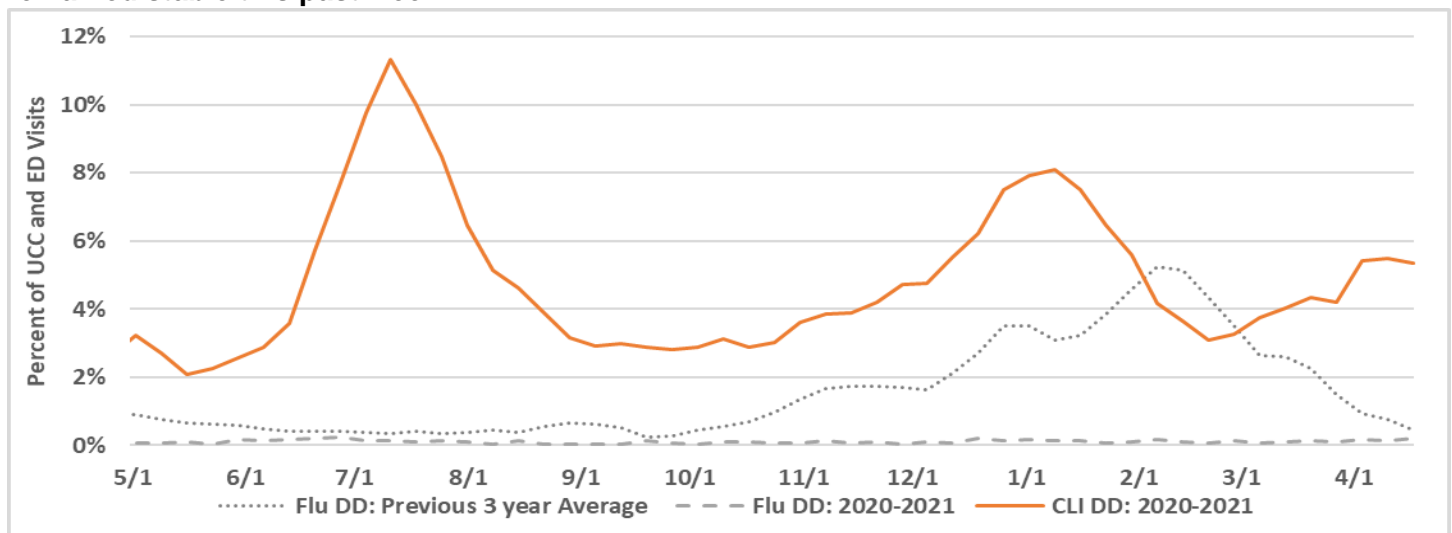


Fig 16. Percentage of Urgent Care Center (UCC), Hospital, and Emergency Department (ED) visits with a discharge diagnosis (DD) for influenza (flu) or COVID-like illness (CLI) in Hillsborough County, based on FL-ESSENCE reporting facilities, by reporting week. As additional DD data is received, the previous weeks could change in value. Visits remain well below the historical values for flu. **The percentage of visits for COVID has remained stable this past week.**



DEATHS AND DEATH RATES

Important Note: COVID deaths are reported to DOH from a variety of sources including hospitals, Medical Examiners Offices and from the Vital Statistics database. The Vital Statistics Database Data is reported electronically and can have delays of 2-4 weeks from the date of death until the date reported. Data during this time frame should be assumed to be incomplete and is indicated by the shaded area in each graph below.

Fig 17. Daily COVID deaths reported by date of death over the past 90 days, based on Merlin case data and Vital Statistics Death data. Over the past 90 days, reported COVID deaths have ranged from 0-14 per day and **deaths are slightly decreasing but could further change due to delays in reporting.**

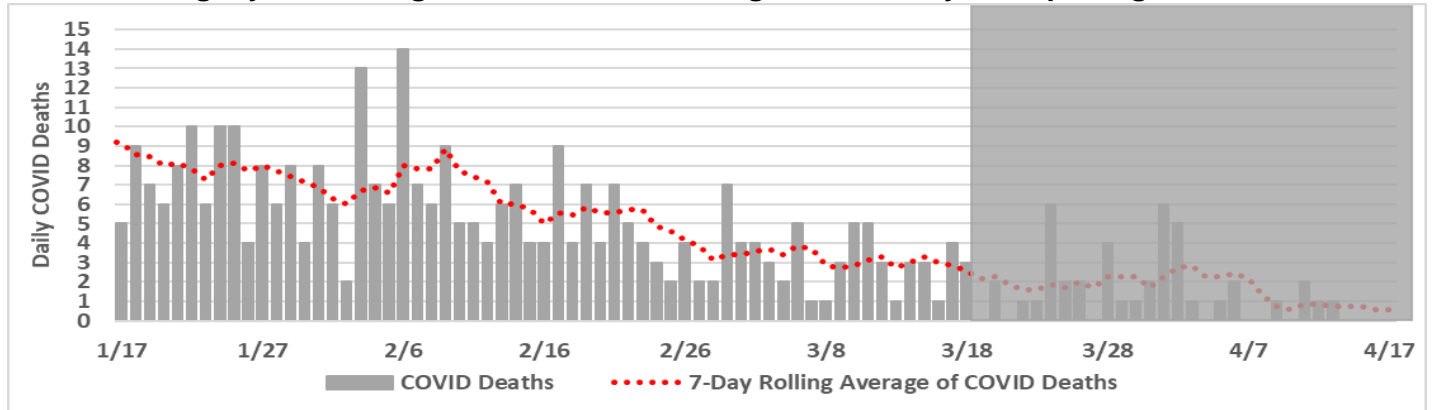


Fig 18. COVID 7-day rolling average death rate per 100,000 by race/ethnicity, for the past 90 days, based on Merlin case data and Vital Statistics Death data. Population data was acquired from FLHealth CHARTS. Cases with unknown race/ethnicity are excluded. Over the past 90 days, **death rates are slightly decreasing in all race/ethnicities but could change due to delays in reporting.**

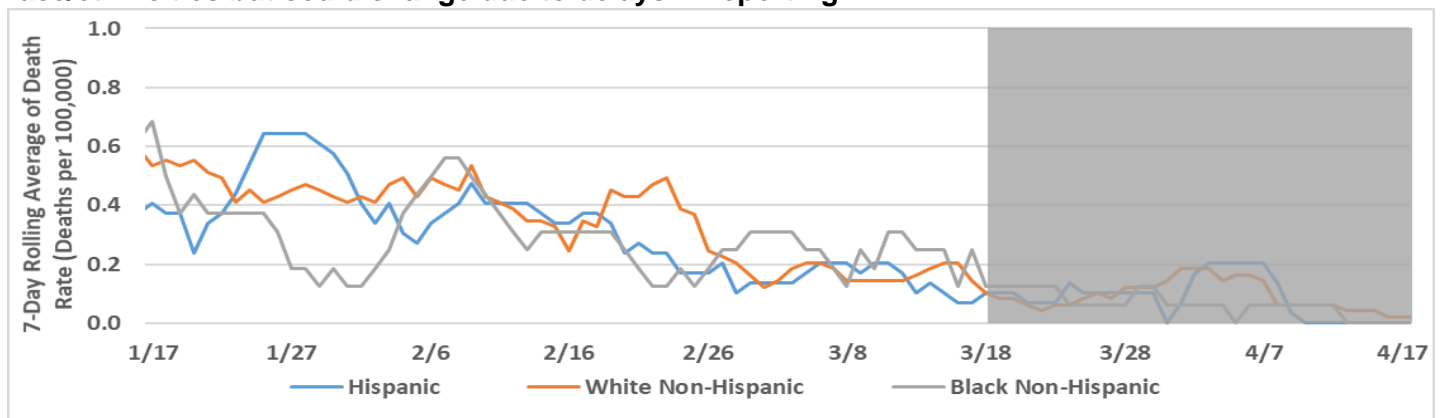


Fig 19. COVID Deaths associated with LTCFs as a percentage of all deaths, over the past 90 days, based on Merlin Data and Vital Statistics Death data. To date, 577 of the 1,660 (35%) COVID deaths in Hillsborough County were associated with LTCFs. Recently, LTCF associated deaths have accounted for about 1-2 deaths/day.

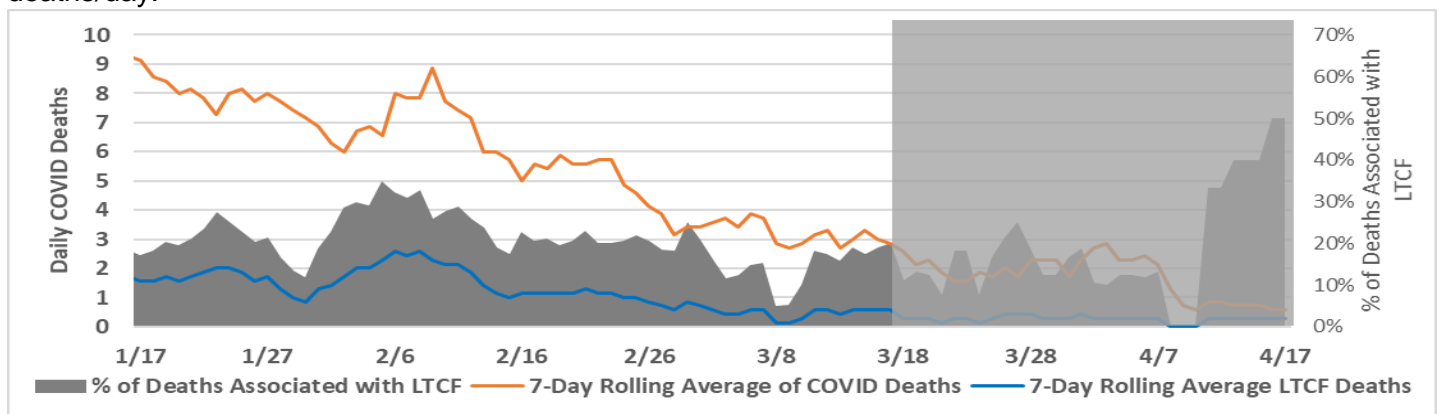


Fig 20. COVID cases, deaths, case fatality rate, and mortality rates by gender, age group and race/ethnicity in Hillsborough County.

Gender	Cases	Deaths	Case Fatality Rate	Mortality rate per 100,000 population
Female	68300	774	1.13%	104.85
Male	59047	886	1.50%	125.31
Unknown	1575	0	0.00%	
Total	128922	1660	1.29%	114.86
Age Group	Cases	Deaths	Case Fatality Rate	Mortality rate per 100,000 population
0-4 years	2958	0	0.00%	0.00
5-14 years	8506	1	0.01%	0.55
15-24 years	22346	3	0.01%	1.63
25-34 years	24947	4	0.02%	1.81
35-44 years	20578	21	0.10%	10.67
45-54 years	19401	67	0.35%	34.88
55-64 years	14951	184	1.23%	105.91
65-74 years	8189	365	4.46%	296.38
75-84 years	4412	531	12.04%	892.74
85+ years	2166	484	22.35%	2027.73
Race	Cases	Deaths	Case Fatality Rate	Mortality rate per 100,000 population
White	61213	1115	1.82%	103.86
Black	15835	247	1.56%	95.78
Other	23733	234	0.99%	205.62
Unknown	28141	64	0.23%	
Total	128922	1660	1.29%	114.86
Ethnicity	Cases	Deaths	Case Fatality Rate	Mortality rate per 100,000 population
Hispanic	37134	375	1.01%	88.75
Non-Hispanic	56315	1028	1.83%	100.52
Unknown	35473	257	0.72%	
Total	128922	1660	1.29%	114.86

Additional COVID surveillance data, visualizations and information can be found at the links below:

- Florida Department of Health Statewide COVID Dashboard: <https://experience.arcgis.com/experience/96dd742462124fa0b38ddedb9b25e429/>
- Hillsborough County COVID Dashboard: <https://www.hillsboroughcounty.org/en/residents/public-safety/emergency-management/stay-safe/covid-19-dashboard>
- Hillsborough County School District Dashboard: <https://hillsboroughschools.org/doc/2744/school-reopening-plan/frequently-asked-questions/coviddash/>

Additional notes about data sources and data collection for the charts and tables used in this report:

Merlin reportable disease database: Merlin serves as the state's repository of reportable disease case reports, including automated notification of staff about individual cases of high-priority diseases. Access to Merlin is available only to approved Department of Health employees. COVID data is entered in Merlin in multiple ways. Data fields associated with Electronic Lab Reports (ELRs) or electronic case reports will be auto populated when available. Additionally, specific to COVID cases, the Healthy Together APP allows for individuals to complete and report demographics, symptomology and other data elements to DOH. Case investigators and contact tracers also make attempts to interview each COVID case to collect or verify demographics and other important public health data. As the data is collected from case investigations the Merlin database will be updated. Some data elements, such as deaths and group care associations (Jails, LTCFs, and Schools) are reviewed by local and state staff for accuracy. Data within Merlin is considered provisional and is subject to change.

AHCA ESS Report: Florida's Agency for Health Care Administration (AHCA) requires all licensees providing residential or inpatient services to use the Emergency Status System (ESS) database for reporting its emergency status, planning or operations. In response to COVID the Agency added new reporting requirements related to COVID cases and hospitalizations at AHCA licensed facilities.

ESSENCE-FL: The Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) is a biosurveillance system that collects emergency department chief complaint data from participating hospitals and urgent care centers in Florida, call data from the Florida Poison Information Center Network, reportable disease data from the Merlin database, and mortality data from the Florida Office of Vital Statistics. The objective of this surveillance system is to provide the epidemiologist with the data sources and analytic tools needed to identify outbreaks or unusual trends more rapidly, leading to a timelier public health response.

FLSHOTS: Florida SHOTS is a free, statewide, centralized online immunization information system that helps healthcare providers and schools keep track of immunization records to ensure that patients of all ages receive the vaccinations needed to protect them from dangerous vaccine-preventable diseases. FLSHOTS is a program of the Florida Health Immunization Section and is supported by the Centers for Disease Control and Prevention.

Vital Statistics: The Florida Department of Health, Bureau of Vital Statistics manages the official database and records for deaths in the State of Florida. When a death occurs, the cause of death and medical certification is completed by a medical certifier, which includes physicians, medical examiners and autonomous advanced practice registered nurses. As these medical certifications occur, data and records are managed and stored within the Vital Statistics database.

FLHealth CHARTS: Powered by Florida's Bureaus of Community Health Assessment and Vital Statistics. CHARTS stands for Community Health Assessment Resource Tool Set, and compiles multiple datasets from a variety of agencies into a single source. Several data sources include Agency for Health Care Administration (AHCA), Florida Department of Health, Florida Department of Elder Affairs, Florida Department of Law Enforcement, and many others. A complete list of data sources can be found at <http://www.flhealthcharts.com/Charts/documents/training/DataSources.pdf> Data queries such as population estimates, birth rates, death rates, marriage rates, and reportable disease statistics can be found using this tool.